

REMARKS

Claims 1-16 are pending. Claims 1-12 are cancelled due to a restriction requirement. Claim 15 is cancelled.

Claim 13 is currently amended to insert the definition of formula (1) from claim 1 and convert it into independent claim form. Additionally, claim 13 is amended to limit the definition of R2 to only branched or unbranched C6-C12 alkyl.

No new matter is added.

Claims 13, 14 and 16 are presented for reconsideration.

Supplemental Information Disclosure Statement (IDS)

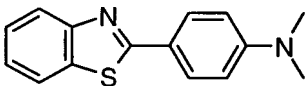
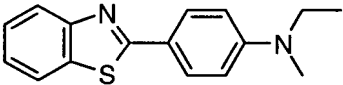
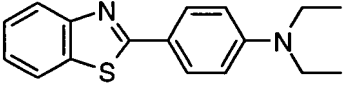
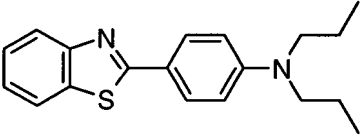
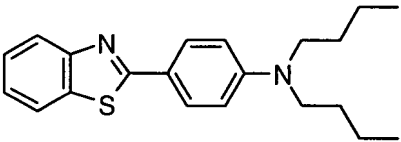
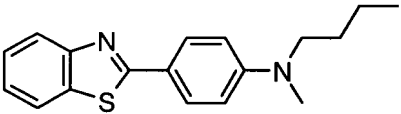
The foreign references, FR 2,803,194, DE 2,333,378, DE 10,206,562, Patent Abstract of JP 01247453, and Chemical Abstract No. 113:37111 were not available to the Examiner to be reviewed. Submitted herewith is a Supplemental Information Disclosure Statement with the foreign references. The Examiner is kindly requested receipt and consideration of these references by returning an initialed copy of USPTO Form 1449.

Claim Rejections – 35 USC 103(a)

Claims 13-16 are rejected under 35 USC 103(a) as being unpatentable over Zwilmeyer (US 2,715,629) in view of Degen et al. (US 4,002,733) and Fablan (Chem. Rev. 1992, p.1205).

1. Zwilmeyer (US 2,715,629) discloses sulfonic acid derivatives of 2-4(4'-dialkylaminophenyl)-benzothiazole wherein the alkyl substituents on the nitrogen atom are not over four carbon atoms each. The reference teaches to use these compounds as fluorescent whitening agents for the whitening of paper and wood pulp.

The exemplified precursor compounds of Zwilmeyer are listed in the Table below:

<u>Example 1</u>	
<u>Example 4</u>	
<u>Example 5</u>	
<u>Example 6</u>	
<u>Example 7</u>	
<u>Example 8</u>	

It is the clear teaching of Zwilmeyer to use the sulfonic acid derivatives of 2-4(4'-dialkylaminophenyl)-benzothiazoles as fluorescent whitening agents for paper applications.

2. Degen et al. (US 4,002,733) discloses sunscreens composition which comprise a pharmaceutical extending medium having incorporated therein a ultraviolet light absorbing compound which is a polyfunctional molecule containing two or more ultraviolet absorbing moieties connected by two or more polar linking groups to one or more aliphatic bridging groups.

The Examiner refers to Example 8 wherein a typical sunscreen agent is prepared. This compound is a dimeric benzothiazole derivative wherein the UV absorbing moiety is linked via an urea linkage to the group "R" which contains fatty acid chains containing 36, 54, 72, 90 or 108 carbon atoms. The compounds disclosed in US 4,002,733 are structurally completely different from the benzothiazoles as described in the present invention.

3. Fabian (*Chem. Rev.* **1992**, p.1205) investigates the solubility of near-infrared absorbing naphthalocyanine dyes in various solvents. Naphthalocyanines absorb in the near infrared region of the spectrum and therefore are not Ultraviolet Light (UV) absorbers.

Fabian is completely silent concerning the cosmetic use of these substances. Furthermore, the solvents disclosed by Fabian for his investigations are inappropriate for cosmetic formulations.

Therefore, the combined teaching of these references would suggest the use of N-alkylated (maximum chain length is butyl or C₄) benzothiazoles which are incorporated in a pharmaceutical extending medium with enhanced solubilities in different nonpolar organic solvents as listed in the Fabian reference (Table II, p. 1205).

These combined teachings do not meet the limitations of the present invention wherein specific benzothiazoles are advantageously used in cosmetic formulations.

Organic UV absorbers, for example, must exhibit a good solubility in cosmetic oils or solvents (not generally in nonpolar solvents) for effective protection from the sun.

Furthermore, the Applicants submit herewith a Rule 132 Declaration by Barbara Wagner. In the Declaration, the compounds as described in the present invention are compared with the compounds of the closest cited art for their solubility in cosmetic oils or solvents. From this comparative test, it is evident that the instant compounds demonstrate an increased solubility in cosmetic solvents, which is an order of magnitude higher than the corresponding solubility values of the compounds of the closest cited art, designated as compounds StdT 1-4. Please note that in this comparative test the compound 2-(4'-di-n-butylamino-phenyl)-benzothiazole of Zwilgmeyer is compared against the closest compounds of the present invention, designated as A1 and A2 in the Declaration.

As discussed in the Declaration, it is shown that the solubility in cosmetic oils is significantly greater for the benzothiazoles of the present invention when compared to the benzothiazoles of the closest cited art, US 2,715,629. The data presented in the Declaration demonstrate clearly that the specific benzothiazole compounds of the present invention are superior with regard to solubility in cosmetically acceptable solvents when compared with compounds of the closest cited art.

Therefore, from the combined teachings of US 2,715,629, US 4,002,733, and Fabian (*Chem. Rev.* 1992, p.1205), a person of ordinary skill could not have predicted the superior solubility properties of the instant benzothiazole which are very important features if the instant compounds are to be used as organic UV absorbers in cosmetic preparations.

These are surprising results and would not have been expected based on the cited art.

In light of this discussion and the Wagner Declaration, Applicants submit that the 35 USC 103(a) rejection is addressed and is overcome.

The Examiner is kindly requested to reconsider and to withdraw the present rejections.

Applicants submit that the present claims are in condition for allowance and respectfully request that they be found allowable.

Respectfully submitted,



for

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Enclosure: Rule 132 Declaration
One Month Extension of Time
Supplemental IDS